

Ploznikov

RZHANOV, A.V.; ~~██████████~~, A.F.

Surface levels on germanium according to data on photoconductivity  
in the infrared spectral region. Fiz.tver.tela 3 no.5:1557-1560 My  
'61. (MIRA 14:6)

1. Fizicheskiy institut imeni P.N.Lebedeva AN SSSR, Moskva.  
(Germanium--Electric properties) (Photoconductivity)

26.2421

30769  
S/181/61/003/011/001/056  
B102/B138

AUTHORS: Plotnikov, A. F., Vavilov, V. S., and Smirnov, L. S.

TITLE: Kinetics of photoconductivity in p-type neutron-irradiated silicon

PERIODICAL: Fizika tverdogo tela, v. 3, no. 11, 1961, 3253 - 3259

TEXT: The defect formation due to fast-neutron irradiation was investigated in single crystals of p-type silicon. The specimens used had been described by the authors in an earlier paper (FTT, 3, 8, 1961). The defect level system arising due to the fast-neutron irradiation in the forbidden band is shown in Fig. 1. The photoconductivity investigated was that connected with the electron transitions to the levels  $E_v + 0.30$  ev,  $E_v + 0.38$  ev and  $E_v + 0.45$  ev. Temperature was around  $100^{\circ}\text{K}$ . The electron was excited by steep-sided light pulses with rise and decay times of 5  $\mu\text{sec}$  each. Photoconduction relaxation was studied separately for each level by two independent methods.  $E_v + 0.30$  ev: (1) The build-up time  $\Delta p_{bn}$  of photoconductivity was found at  $\Delta p \sim p_0$  on an  $\text{ЭHO-1(ENO-1)}$  oscilloscope. X  
Card 1/4

Kinetics of photoconductivity in ...

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B102/B138

$m_0$ , the initial electron concentration at level M, was found to be  $\approx 8 \cdot 10^{12} \text{ cm}^{-3}$  and  $\sigma_p \approx 3 \cdot 10^{-14} \text{ cm}^2$  was determined for the hole trapping cross section. (2) The build-up curves  $\Delta p_{bn} = f(t)$  were investigated for  $p_0 \gg \Delta p$ . It was confirmed that the building is governed by an exponential law. The parameters of the centers were found to be  $m_0 \approx 10^{13} \text{ cm}^{-3}$ ,  $\sigma_p \approx 3 \cdot 10^{-14} \text{ cm}^2$  (first illumination) and  $m \approx 10^{13} \text{ cm}^{-3}$ ,  $\sigma_p \approx 2.5 \cdot 10^{-14} \text{ cm}^2$  (second illumination).  $E_v + 0.38 \text{ ev}$ : (1) Recording of the relaxation pulses without constant illumination for  $p_c \approx 8 \cdot 10^3 \text{ cm}^{-3}$  and  $\Delta p \approx 3 \cdot 10^8 \text{ cm}^{-3}$  yielded:  $m_0 q I \approx 10^9 \text{ cm}^{-3} \cdot \text{sec}^{-1}$  and  $\sigma_p \approx 5 \cdot 10^{-17} \text{ cm}^2$ . (2) Recording of  $\Delta p_{bn}$  with constant illumination ( $p_0 \approx 6 \cdot 10^9 \text{ cm}^{-3}$  and  $\Delta p \approx 3 \cdot 10^8 \text{ cm}^{-3}$ ) yielded:  $m_0 q I \approx 10^9 \text{ cm}^{-3} \cdot \text{sec}^{-1}$  and  $\sigma_p \approx 7 \cdot 10^{-17} \text{ cm}^2$ . (q - capture cross section of a photon by an electron at the level M; I - intensity of exciting light.)  $E_v + 0.45 \text{ ev}$ :  $\Delta p_{bn}$  was studied as a function of time. It was found that for  $t < 0.2 \text{ sec}$  carriers localized at centers with  $E_v + 0.30 \text{ ev}$

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Kinetics of photoconductivity in ...

and for  $0.2 < t < 0.6$  sec carriers localized at  $E_v + 0.38$  ev participated in relaxation. For  $t > 0.6$  sec the carriers taking part in relaxation were localized in centers with the following parameters:

$\sigma_p \approx 10^{-17} \text{ cm}^2$  and  $m_0 q I = 10^9 \text{ cm}^{-3} \text{ sec}^{-1}$ ; they belong to the ( $E_v + 0.45$  ev) level. Finally the relaxation of photoconductivity was studied which was connected with electron transitions from the valence band to the ( $E_v - 0.16$  ev) level. This level was found to be an effective electron trap, with a cross section of  $\sigma_n \sim 10^{-13} - 10^{-15} \text{ cm}^2$ . For holes the trapping cross section was only  $\sim 10^{-19} \text{ cm}^2$ . Result: Exposure of high-purity p-type silicon specimens (resistivity  $\rho \sim 110 \text{ ohm} \cdot \text{cm}$ ; oxygen content:  $\sim 5 \cdot 10^{15} \text{ cm}^{-3}$ ; hole concentration in the dark:  $8 \cdot 10^8 \text{ cm}^{-3}$ ; Fermi level:  $0.2 - 0.3$  ev distant from the edge of the valence band) to a fast-neutron flux ( $\sim 10^{13} \text{ n/cm}^2$ ) with  $\sim 1$  Mev led to the appearance of  $\sim 10^{14}$  defects/ $\text{cm}^3$  in the forbidden band. The authors thank B. M. Vul, S. M. Ryvkin, L. D. Paritskiy, I. D. Yaroshetskiy, G. N. Galkin and B. S. Kopylovskiy

Card 3/4 X

P/034/60/000/009/00<sup>1</sup>/OC4  
A222/A026

AUTHOR: Płowiec, Ryszard, Master of Engineering

TITLE: On some uses of ultrasonic equipment for automatic checking of products

PERIODICAL: Pomiary-Automatyka-Kontrola, no. 9, 1960, 367 - 370

TEXT: Zakład Elektroakustyki Politechniki Warszawskiej (Department of Electroacoustics, Warsaw Polytechnic) in cooperation with the Instytut Podstawowych Problemów Techniki PAN (Institute of Fundamental Engineering Problems, Polish Academy of Sciences) designed a simplified ultrasonic defectoscope for automatic checking of products. The principle of the device is shown in Figure 2. The circuit diagram of the transmitter which uses a quartz crystal is shown in Figure 3, where  $V_1$  indicates a thyratron,  $V_2$  and  $V_3$  electron tubes in a multivibrator circuit,  $P_1$  a potentiometer to control the pulse width. The frequency is step-controlled within 0.8 - 4.5 Mc. The wiring diagram of the receiver is shown in Figure 4; it is a 4-stage voltage amplifier with a range of 0.75 - 5 Mc at 85 dB. Amplification is controlled by means of potentiometer  $P_2$ . The receiver uses a barium titanate crystal. The microammeter  $P_w$  is used as the (attenuation) indica-

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On some uses of ultrasonic . . . . .

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A222/A026

tor. The system described is suitable for measuring ultrasonic attenuation in materials within 60 dB. A sensitive polarized relay associated with the tube V<sub>9</sub> (Fig. 4) actuates an acoustic signal. The wiring diagram of the power supply is shown in Figure 5. The complete assembly shown in Figure 6 is used to detect fissures in basalt castings though it may be used for other material tests as well. An automated installation for use in conjunction with the above defectoscope is shown in Figures 7 and 8. The minimum diameter of detectable deficiencies perpendicular to the ultrasonic wave propagation is about 2 mm, maximum test speed is about 20 cm/sec for the P<sub>w</sub> indicator (Fig. 4), about 60 cm/sec for the acoustic signal, and about 150 cm/sec for a recording instrument. Mechanical data of the installation in Figure 7 and 8 are: rotation speed 1 rpsec, pitch 10 mm, testing duration for a tube 0.5 m long about one minute, testing rate for tubes 0.5 m long about 40 tubes per hour. There are 11 figures and 6 references: 3 Polish, 2 German, and 1 Soviet.

ASSOCIATION: Instytut Podstawowych Problemów Techniki PAN (Institute of Fundamental Engineering Problems, Polish Academy of Sciences)

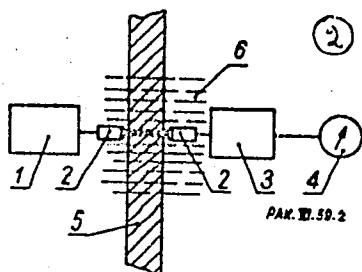
Card 2/6

In some uses of ultrasonic . . . . .

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A222/A026

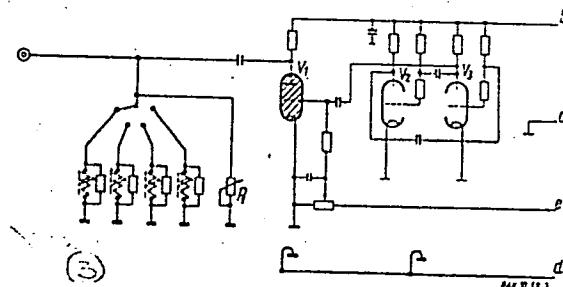
Figure 2: Block diagram of ultrasonic defectoscope.

1 - transmitter, 2 - converters, 3 - receiver, 4 - meter, 5 - material subject to test, 6 - liquid



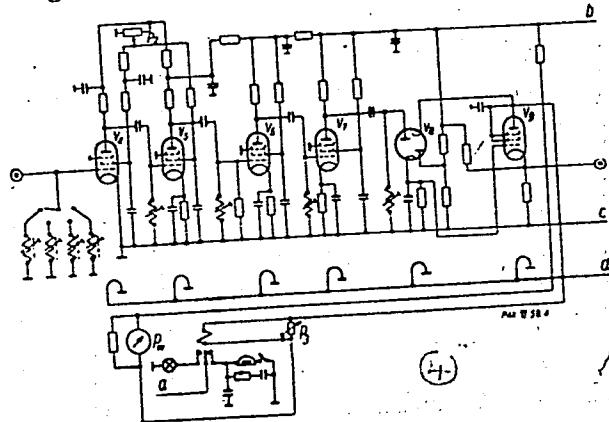
Card 3/6

Figure 3: Circuit diagram of transmitter



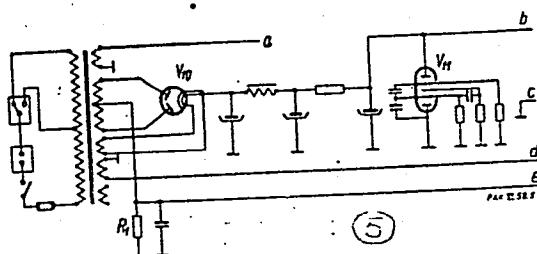
On some uses of ultrasonic . . . . .

Figure 4: Circuit diagram of receiver



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Figure 5: Circuit diagram of power supply unit



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On some uses of ultrasonic . . . . .

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A222/A026

Figure 6: Total view of ultrasonic defectoscope

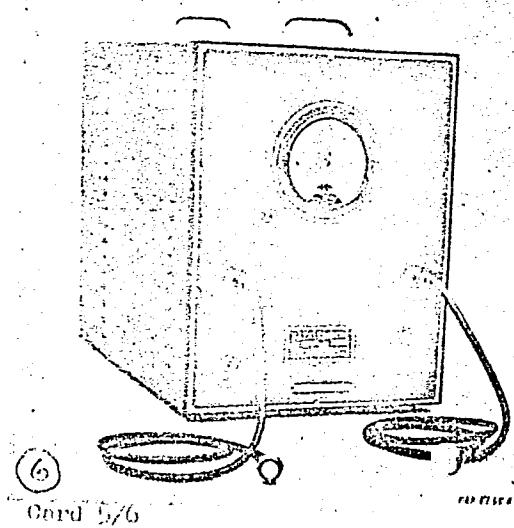
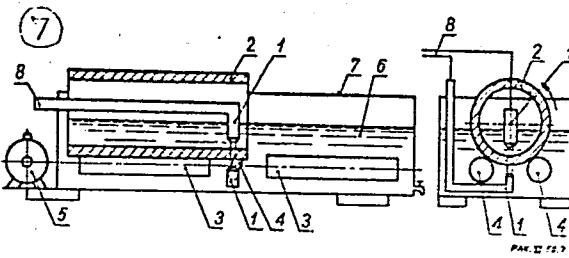


Figure 7: Principle of automated control installation

1 - converter, 2 - tube subject to test,  
3 - tube rotating rollers, 4 - tube  
shifting rollers, 5 - motor, 6 - liquid,  
7 - vat, 8 - conductor wires

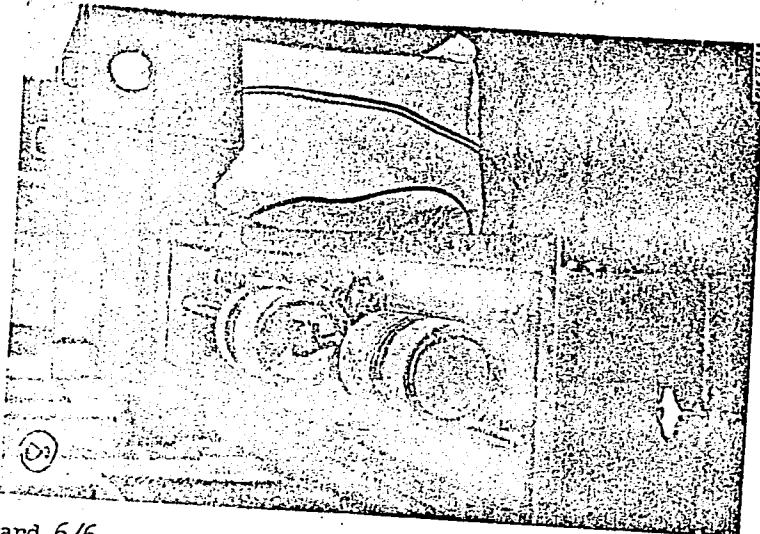


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On some uses of ultrasonic . . . .

Figure 8: Complete setup



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APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341320014-2"

Author: Kulagin, G. N.

36

ORG: Physicotechnical Institute of Low Temperatures, Akademii nauk UkrSSR, Kiev B  
(Fiziko-tehnicheskiy institut nizkikh temperatur Akademii nauk UkrSSR)

TITLE: Effect of UV radiation<sup>15</sup> and vacuum on the tensile strength<sup>15</sup> and destruction of polymer films

SOURCE: Mekhanika polimerov, no. 3, 1966, 359-564

TOPIC TAGS: ultraviolet radiation, polymer mechanical strength, polymer tensile strength, polymer plasticity, ultraviolet radiation dose, polymer, polyethylene terephthalate, polymer cracking, polymer destruction, polymer radiation destruction

ABSTRACT: The effect of UV radiation on the mechanical properties of poly(ethylene terephthalate) (PETP) films was studied. The changes were noted in tensile strength and deformation, and the formation of defects, i.e., cracking. The samples used were strips of PETP film, 6 mm wide, 20 mm long and 10  $\mu$  thick. Irradiation was carried out by means of an UV mercury lamp PRK-2 which had a linear spectrum in the range 2400 to 3700 Å, either in air or in evacuated sealed quartz tubes for periods from 1 to 80 hr. The effect of heat was excluded. The experiments were conducted at room temperature. The irradiated samples were subjected to tensile strength tests on a special machine. It was found that open cracks developed on the irradiat-

Card 1/2

UDC: 678.84:539.23+539.4

L 34823-66

ACC NR: AP6023396

ed side of the samples if the irradiation took place in air. Vacuum-irradiated samples developed cracks only on deformation during the tensile test. A weakening of molecular bonds during the irradiation was assumed. Cracking began at definite stresses and deformations which decreased with an increase in the radiation dose. The tensile strength and plasticity of the irradiated films decrease with an increase in the duration of irradiation. The air-irradiated samples display a higher loss in tensile strength than the vacuum-irradiated samples, which suffer a higher loss in plasticity. Vacuum-irradiated samples form no visible defects on the surface: their surface remains smooth even after rupture of the sample. Orig. art. has: 8 figures and 1 formula. [BN]

SUB CODE: 17, 11/ SUBM DATE: 12Jul65/ ORIG REF: 006/ OTH REF: 002/ ATD PRESS:  
5032

Card 2/2 1b

PILOYANSKAYA, L. S.  
USSR/Medicine - Intestinal Parasites

FD 148

Card 1/1

Author : Ployanskaya, L. S.  
Title : The problem of the interspecies relationships between the intestinal protozoa and the pathogenic microflora involved in the parasitocenosis of the intestines of young children  
Periodical : Zhur. mikrobiol. epid. i immun. 5, 18-21, May 1954  
Abstract : Investigations of the biocenotic relationships between various intestinal protozoa and pathogenic microflora inhabiting the intestines of children under 4 years of age show that Lamblia [Giardia] intestinalis is symbiotic with Flexner bacilli and antagonistic to Kruse-Sonne and Breslau bacilli. The results of the investigations are presented in chart form. 11 Soviet references are cited.  
Institution : Chair of General Biology and Parameatology, Institute Academyian Ye. N. Pavlovsky of the Military Medical Academy, Institute E. M. Kirov  
Submitted : October 29, 1963

PLSEK, J. : MUNK, P.

"o-terphenyl."

p. 980 (Institute of Applied Physics - Czechoslovak Academy of Science)  
Vol. 51, No. 5, May 1957

SO: Monthly Index of East European Accession (SAI) LC, Vol. 7, No. 5, May 1958

PILSEK, J., MUDr.; BRUNCLIK, L., MUDr.

Ileus caused by foreign body. Rozhl. chir. 35 no.5:280-281  
May 56.

1. Chirurg. klinika nemocnice Pod Petrinem-Prednosti prim. MUDr.  
Z. Vahala.

(INTESTINAL OBSTRUCTION, etiol. & pathogen.  
pieces of orange in small intestine, surg. (Gz))

PLSKO, Eduard, inz., C.Sc.; HERKELOVA, Maria, prom. chem.

Spectrochemical determination of chromium in silicates by applying vibrating electrodes. Chem zvesti 18 no.10; 745-749 '64.

1. Institute of Inorganic Chemistry of the Slovak Academy of Sciences, Bratislava, Dubravská cesta.

CZECHOSLOVAKIA / Inorganic Chemistry. Complex Compounds. C

Abs Jour: Ref Zhur-Khimiya, No 21, 1958, 70324.

Author : Plshko.

Inst : Not given.

Title : Investigation of the Conditions for the Formation of Pyrogallol Compounds with Molybdates and Tungstates.

Orig Pub: Chem. zvesti, 1958, 12, No 2, 95 - 101.

Abstract: It was determined spectrophotometrically that in the system pyrogallol (Pg) - $\text{Na}_2\text{WO}_4$  or  $\text{Na}_2\text{MoO}_4$  (I) colored ions in the pH range of 3.5 exist in an aqueous solution at a pH 6-8 and have a ratio Pg:1 and a ratio Pg:1. The constant instability for a molybdenum complex is equal to  $2 \cdot 1 \cdot 10^{-6}$  and for the complex of W it is  $4 \cdot 6 \cdot 10^{-8}$ .

Card 1/1

~~PL SHKO~~, PLSHKO.

CZECHOSLOVAKIA/Optics - Optical Methods of Analysis. Instruments. K-7

Abs Jour : Referat Zhur - Fizika, No 3, 1957, 7992

Author : Pl shko, Gazho

Inst :

Title : Use of Monochromator for Spectrophotometry.

Orig Pub : Chem. zvesti, 1956, 10, No 4, 250-253

Abstract : Description of a monochromator for a spectrophotometry used in the visible region, which can be used for analytical purposes along with commercially available apparatus.

Card 1/1

- 114 -

L 9921-66 EWP(t)/EWP(b)/EWP(h) JD  
ACC NR: AP6003383

SOURCE CODE: CZ/0043/65/000/007/0544/0549

AUTHOR: Plsko, Edward—Plshko, E. (Engineer; Candidate of sciences)

ORG: Institute for Inorganic Chemistry, Slovak Academy of Sciences, Bratislava  
(Ustav anorganické chemie Slovenskej akadémie vied)

TITLE: Correction for the influence of the composition of a binary matrix in  
spectrophotometric analysis

PUBLISHER: Chemische Berichte, vol. 78, 1965, 544-549

TOPIC: chemical composition, mathematical method, graphic technique, cobalt,  
spectrophotometric analysis, quantitative analysis

ABSTRACT: A mathematical method showing how to calculate the correction is described.  
The mathematical solution can be presented, under certain conditions, in a graphical  
form. The described method was verified by spectrophotometric determination of  
cobalt in a matrix with a changing ratio of calcium carbonate and magnesium carbonate.  
Orig. art. has: 5 figures and 9 formulas. [JPRS]

SUB CODE: 07, 12 / SUBM DATE: 23Jan65 / OTH REF: 001 / SOV REF: 001

BC  
Card 1/1

PLSK, E.

Contribution to the study of molybdate ion condensation.

p. 416 (CHEMICKE ZVESTI) Vol. 10, no. 7, Sept. 1956,  
Bratislava, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,  
March 1958

PLSKO, E.

CZECHOSLOVAKIA/Optics - Physical Optics

K-5

Abs Jour : Ref Zhur - Fizika, No 3, 1958, No 6920

Author : Plsko, E.

Inst : Not Given

Title : Energy Distribution from a Non-Black Body and Calculation of Its Temperature

Orig Pub : Jemna mechan. a opt., 1957, 2, No 3, 95-99

Abstract : A method is described for experimental determination of the spectral distribution of the energy in the radiation of non-black sources. A method is developed for calculating the temperatures of these sources with the aid of experimenting data measured for two wavelengths taking into account the coefficient of absorption of the source.

Card : 1/1

PLSKO, E.

CZECHOSLOVAKIA/Optics - Instruments of Optical Analysis

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341320014-2

Abs Jour : Ref Zhur - Fizika, No 6, 1958, No 14513

Author : Plsko, E., Gazecký

Inst : Not Given

Title : Construction of a Spectrophotometer

Orig Pub : Techn. praca, 1957, 9, No 1, 18-21

Abstract : Description of a spectrophotometer for the visible region of the spectrum (400-700 millimicrons), constructed on the basis of the Zeiss miller monochromator. The receiver used is a selenium photocell.

Card : 1/1

PLSKO, E.

CZECHOSLOVAKIA / Analytical Chemistry. General.

E

Abs Jour: Ref Zhur-Khimiya, No 4, 1959, 11453.

Author : Plsko, E.

Inst : Not given.

Title : Successes in the Region of the Emissive Spectral Analysis.

Orig Pub: Nasa veda, 1958, 5, No 5, 217-230.

Abstract: A brief exposition of the contemporary state of the spectral analysis. Bibliography of 9 titles.  
-- E. Shpital'naya.

Card 1/1

PLSKO, E.

Gregor; Gazo, J.; Plsko, E. Contribution to the problem of the desulfurization of waste air from viscose fiber factories with ferriferous absorbents. p. 159. CHEMICKY PRUMYSL. Praha. Vol. 5, no. 4, Apr. 1955.

SO: Monthly List of the East European Accession, (EEAL), LC. Vol. 4, no. 10, Oct. 1955. Uncl.

Pls K, E

4

The problem of desulfurization of waste gas in a viscose plant by ferric absorbents. M. Gregor, J. Gazo, and E. Pilko. *Chem. Prámy 5, 169-174 (1931)*. The removal of sulfur from the waste gas in the treatment of viscose by  $H_2SO_4$  in order to recover S and make the air hygienically acceptable.

objectionable was studied. Expts. with 2 absorption systems were made: (1) a suspension of  $Fe_2O_3$  hydrate prep'd. by alkalinizing a  $FeCl_3$  soln. by soda; (2) a colloidal soln. of Prussian blue prep'd. either by mixing KCN soln. with  $FeSO_4$  and subsequent oxidation of the resulting  $KFeO_2$  ferroxydite by air or by mixing directly solns. of  $FeCl_3$  and K ferroxydite. The max. degree of absorption of H<sub>2</sub>S attained was 96%, which was not sufficient according to hygienic safety standards. L. A. Holwich

Pisko, E.

5

The use of a monochromator in place of a spectrophotometer, E. Pisko and I. Gažo (Sloven. Akad. Vied a Vysoká Škola Tech., Bratislava, Czech.). Chem. Zvesti 10, 250-3 (1956) (German summary).—A lab.-made instrument is described. Ian Micka

✓  
P.M.  
J.W.

L 63707-65 EWT(1)/EEC(b)-2/T IJP(c)

ACCESSION NR: AT5022234

HU/2502/64/0041/0004/0373/0382

24  
23  
31

AUTHOR: Pleko, Eduard (Pleshko, E.) (Bratislava)

TITLE: Determining the optimum conditions for establishing the number of individual measurements in spectroscopic concentration determinations by means of extrapolation

SOURCE: Academiae scientiarum hungaricae. Acta chimica, v. 41, no. 4, 1965,  
373-382

TOPIC TAGS: spectroscopy

ABSTRACT: Equations were derived for calculating the relative error in spectroscopic concentration determinations. The use of these equations for establishing the optimum number of individual determinations was demonstrated on the basis of theoretical consideration and of numerical examples. Orig. art. has: 2 tables, 26 formulas.

Card 1/2

L 63707-65

ACCESSION NR: AT5022234

ASSOCIATION: Institut fur anorganische Chemie der Slowakischen Akademie der  
Wissenschaften, Bratislava (Institute for Inorganic Chemistry of the Slovakian  
Academy of Sciences)

SUBMITTED: NP, GP

ENCL: 00

SUB CODE: NP, GP

NR REF SOV: 001

OTHER: 020

JPRS

dm  
Card 2/2

PLJKO, Eduard

Photographic process for the synthesis of graded filters.  
Magy krm Polyoxy '71 no. 1120-23 Jn 1969.

1. Institute of Inorganic Chemistry of the Slovak Academy of  
Sciences, Bratislava.

L 1374-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG  
ACCESSION NR: AP5024532 44,55

CZ/0043/64/000/010/0745/0749

AUTHOR: Plsko, E.(Plško, E.)(Engineer, Candidate of sciences)(Bratislava);  
Herkelová, M.(Herkelova, M.)(Graduate chemist)(Bratislava) 32B

TITLE: Spectrochemical determination of chromium in silicates by means of the  
vibrating electrode 44,55 27

SOURCE: Chemicke zvesti, no. 10, 1964, 745-749

TOPIC TAGS: spectrographic analysis, analytic chemistry, chromium, silicate,  
electrode 44,55

ABSTRACT: Described is a quick and accurate method of spectrographic determination  
of small amounts of chromium in silicates by using a vibrating electrode. Samples  
to be investigated were mixed with CoO and Li<sub>2</sub>CO<sub>3</sub> at a ratio of 2:1:5. Spectral  
lines of Cr and lines of the inner standard of Co make it possible to determine chromium within the range of 0.001 and 0.5 percent with a relative  
error of ±5.6 percent at a concentration of 0.01 Cr. Origartu has: 2 graphs.

ASSOCIATION: Ustav anorganickej chemie Slovenskej akademie vied, Bratislava  
(Inorganic Chemistry Institute, Slovak Academy of Sciences)

Card 1/2 44,55

L 1374-66  
ACCESSION NR: AP5024532

SUBMITTED: 18Jun64

NR REF Sov: 001

ENCL: 00

0  
SUB CODE: IC, GC

OTHER: 014

JPRS

Card 2/2 dg

L 1607-66 ENG(m)/T DS

ACCESSION NR: AP5024489

18  
15  
B

CZ/0043/64/000/011/0830/0836

AUTHOR: Plska, E.(Plska,E.)(Candidate of sciences, Engineer)(Bratislava)

TITLE: Investigation of evaporation of non-conducting materials from carbon electrodes during spectrum analysis

SOURCE: Chemicke zvesti, no. 11, 1964, 830-836

TOPIC TAGS: carbon product, electrode, evaporation, spectrum analysis, spectral line

ABSTRACT: Integral intensity of the spectral line of an element is plotted as a function of an integral intensity of the spectral line of another element, and thus facilitates the investigation of their evaporation. The derived theoretical functions were verified for the case of a fractional distillation, and for the case of steady rate of evaporation. The equations derived may be used to evaluate the influence of future conditions on the rate of steady evaporation of elements from the crater of a carbon electrode. Orig. art. has: 6 formulas, 5 graphs.

Card 1/2

L 1607-66  
ACCESSION NR: AP5024489

ASSOCIATION: Ustav anorganickej chemie Slovenskej akademie vied, Bratislava  
(Institute for Inorganic Chemistry, Slovak Academy of Sciences)

SUBMITTED: 20Jul64

ENCL: 00

4-4  
SUB CODE: GC,NP

NR REF SOV: 000

OTHER: 003

JPRS

Card 2/2 DP

PLSKO, E.

27  
The condensation of tungstate ions. M. Liska and E.  
Plsko (Slovenská akad. vied, Bratislava, Czech., "Chem.  
spisov." 17, 389-8 (1957) (German summary). By interelec-  
trode titration of water solns. Na<sub>2</sub>WO<sub>4</sub> with strong basic  
anhydride it was demonstrated that the relation of  $\alpha$  to the concn. of the  
soln. shows the min. at ratios 1.16H<sup>+</sup>/1W and 1.0H<sup>+</sup>/1W.  
The results of the measurements do not show the existence  
of W<sub>n</sub>O<sub>n+m</sub><sup>m-</sup> ions in water soln. Jan Micka

PLSKO, E.

Gregor; Gazo, J. Contribution to the problem of the desulfurization of waste air from viscose fiber factories with ferriferous absorbents. p. 159. CHEMICKY PRUMYSL, Praha, Vol. 5, no. 4, Apr. 1955.

APPENDIX: Contribution to the problem of the desulfurization of waste air from viscose fiber factories with ferriferous absorbents, (Czech.), Chemický průmysl, Praha, Vol. 5, no. 4, Oct., 1955, uncl.

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341320014-2

TESTED, DATED  
The effect of water salinity on the optical rotation of  
period 7 Eduard Pfeiffer - Vom Institut für Physikalische  
Chemie und Physikalisch-Chemische Technologie der Universität  
Münster, Westfalen, Germany.

Water from Lake Constance, Lake Constance, Lake Constance,  
and Lake Constance, Lake Constance, Lake Constance,  
and Lake Constance, Lake Constance, Lake Constance,

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341320014-2"

PISKO, E.

✓ Contribution to the methods of chemical structure research with application of reflection spectra. J. R. Pisko (Slovakian Acad. Sci., Bratislava). *Acta Univ. Szegediensis, Acta Phys. et Chem.*, 5, Nos. 3-4, 58-68 (1959) (in German).—The reflection spectra of powd.  $\text{NiSO}_4 \cdot 7\text{H}_2\text{O}$  (I),  $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$  (II),  $\text{Ni}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$  (III),  $\text{NiCl}_3 \cdot 6\text{H}_2\text{O}$  (IV), and  $\text{NiCl}_3 \cdot 2\text{H}_2\text{O}$  (V) were compared with the absorption spectrum of solns. of  $\text{NiSO}_4$  (VI). The rather good similarity in the position of the absorption max. of I, II, III, and VI proves the absorbing species to be a 6-fold  $\text{H}_2\text{O}$ -coordinated  $\text{Ni}^{++}$  ion. In IV and V the max. are shifted to higher wave lengths, caused by the polarizing  $\text{Cl}^-$  ions. The absorption spectrum of  $\text{Ni}(\text{NH}_3)_6\text{Cl}_2$  is reported.

L. Müller

2

PLSKO, Eduard, inz., C.Sc. (Bratislava, Dubravská 5, Pavilon chemických ústavov Slovenskej akademie vied); OBERT, Teodor, promovany fyzik (Bratislava, Dubravská 5, Pavilon chemických ústavov Slovenskej akademie vied).

Examination of the formation of aluminum chlorine complexes by means of optical rotation in a magnetic field. Chem zvesti 16 no.3:169-174 Mr 1962

1. Ceskoslovenska akademie ved, Ustav anorganickej chemie Slovenskej akademie vied, Bratislava.

PLSKO, E., inz., C.Sc.

Influence of temperature on the interferometric determination  
of refractive index. Jeman mech opt 6 no.2:54-56 F '61.

1. Ustav anorganickej chemie, Slovenska akademia vied,  
Bratislava.

*Leky, J.*

Jozef Leky, M.D.

Country: Czechoslovakia

Academic Degrees:

Affiliation:

Source: Bratislava, Chemické Zvestník, No 7, Jul 60, p 137

Janek, J.

Academic Degrees: Engineer; Candidate of Technical Sciences

Affiliation: Institute of Inorganic Chemistry of the Slovak Academy of Sciences in Bratislava; Department of Inorganic Technology at the Slovak Technical University in Bratislava.

Data: Co-author of "Preparation of Pure Aluminum Fluoride," Source.

Malinovský, M.

Academic Degrees: Engineer; Candidate of Technical Sciences

Affiliation: Institute of Inorganic Chemistry of the Slovak Academy of Sciences in Bratislava; Department of Inorganic Technology at the Slovak Technical University in Bratislava.

Data: Co-author of "Preparation of Pure Aluminum Fluoride," Source.

Lešek, J.

Academic Degrees: Engineer, Candidate of Chemical Sciences

Affiliation: Institute of Inorganic Chemistry of the Slovak Academy of Sciences in Bratislava; Department of Inorganic Technology at the Slovak Technical University in Bratislava.

Malina, O.

Academic Degrees: Engineer

Affiliation: Institute of Inorganic Chemistry of the Slovak Academy of Sciences in Bratislava; Department of Inorganic Technology at the Slovak Technical University in Bratislava.

Data: Co-author of "Preparation of Pure Aluminum Fluoride," Source.

PROKS, Ivo, inz., CSc.; PLSKO, Eduard, inz., CSc.; OBERT, Teodor,  
promovany fyzik

Calculation extrapolation for spectroscopic determination  
of admixtures. Chem zvesti 17 no.12:830-838 '63.

1. Ceskoslovenska akademie ved, Ustav anorganickej chemie  
Slovenskej akademie vied, Bratislava, Dburavska cesta.

PLSKO, Eduard, inz., ScC.

Investigation of the powder substances spectrum excitation by  
using sliding electrodes. Pt. 2. Chem zvesti 17 no.5:285-  
293 1963.

1. Ceskoslovenska akademie ved, Ustav anorganickej chemie  
Slovenskej akademie vied, Bratislava, Dubravská cesta.

PLSKO, Eduard, inz., CSc.

Nonstandard spectrographic determination of rhodium in platinum-rhodium. Chem zvesti 17 no.6:434-438 '63.

1. Ceskoslovenska akademie ved, Ustav anorganickej chemie Slovenskej akademie vied, Bratislava, Dubravska cesta.

PLSKO, Eduard, inz., C.Sc.

Excitation of the spectrum of powder substances in using shaking electrodes. Part 1; Evaluation of the effect of distance between the electrodes. Chem zvesti 16 no.11:777-783 N '62.

1. Ceskoslovenska akademie ved, Ustav anorganickej chemie Slovenskej akademie vied, Bratislava, Dubravská cesta.

PLSKO, Eduard, inz., C.Sc. (Bratislava, Kollarovo namesti 2, Chemicky pavilon, Slovenska vysoka skola technicka)

Examining some physical properties of carbon electrodes for spectral analysis. Chem zvesti 15 no.6: 404-413 Je '61.

1. Ustav anorganickej chemie, Slovenska akademia vied, Bratislava.

PLSKO, Eduard, inz., C.Sc.

Calculation of the thermal expansion of liquids by measuring  
the temperature dependence of their refractive index. Jemna mech  
opt 6 no.5:140-141 My '61.

1. Ustav anorganickej chemie, Slovenska akademia vied, Bratislava.

PUBKO, Edward

On the spectrochemical determination of chrome in industrial  
sewage water with the application of copper folia electrodes.  
Chemia anal 7 no.1:239-244 '62.

1. Czechoslovak Akademy of Sciences, Department of Silicate  
Chemistry and Department of Inorganic Chemistry, Slovak Academy  
of Sciences, Bratislava.

PLSKO, Eduard, inz., Sc.C.; KANCLIR, Edmund, dr., inz., Sc.C.

Evaluation of color shades of kaolins by means of trichromatic coordinates. Sklar a keramik 12 no.4:104-106 Ap '62.

1. Ceskoslovenska akademie ved, Ustav anorganicke chemie Slovenskej akademie vied, oddeleni silikatove chemie, Bratislava.

PLSKO, Eduard, cand.sc. (Pavilon, Slovenska akademie vied, Patronka, Bratislava, Czechoslovakia); PROKS, I. (Pavilon, Slovenska akademie vied, Patronka, Bratislava, Czechoslovakia)

A simple extrapolation method of the spectrographic determination of contaminations in standard samples. Acta chimica Hung 30 no.3:267-276 '62.

1. Institut fur anorganische Chemie, Slovakische Akademie der Wissenschaften, Bratislava.

PLSKO, Eduard, inz., C.Sc.

Evaporation study on nonconducting materials from carbon electrodes during the process of spectrum analysis. Chem zvesti 18 no.11:830-836 '64.

1. Institute of Inorganic Chemistry, Slovak Academy of Sciences, Bratislava, Dubravska cesta.

Plsko S.

Czechoslovakia /Chemical Technology. Chemical Products I-16  
and Their Application

Treatment of natural gases and petroleum.  
Motor fuels. Lubricants.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31965

Author : Plsko S.

Title : Methods for Determining the Degree of Aging of  
Electroinsulating Oils.

Orig Pub: Paliva, 1956, 36, No 6, 203-206

Abstract: An analysis (on the basis of literature data) of  
the effects of temperature, partial oxygen pres-  
sure, catalysts and electric current on the pro-  
cess of aging of insulation (transformer) oils,  
and a description of the current methods of test-  
ing these oils for oxidability and aging. Bibli-  
ography 11 references.

Card 1/1

Plsko, S.

Improved electronic time switch for the automatic collection of distillates. p. 310

Vol. 9, no. 5, May 1955.

CHEMICKE ZVESTI

SO: Monthly List of East European Accession, (EEAL), LC, Vol. 4, No. 9,  
Sept. 1955, Uncl.

PLSKO, Stefan; FILAK, Jozef

Determination of the light hydrocarbon content in nonstabilized petroleum. Ropä a uhlie 6 no. 6:188-191 Je '64.

1. Slovnaft National Enterprise, Research Institute of Petroleum and Hydrocarbon Gases, Bratislava.

PLUEAR, J.

Turbine and boiler materials for use at high pressures and temperatures.  
p. 677

STROJIRENSTVI (Ministerstvo tezkeho strojirenstvi, Ministerstvo presneho  
strojirenstvi a Ministerstvo automobiloveho prumyslu a  
zemedelskych strouju) Vol. 6, No. 10, Oct. 1956

Praha, Czechoslovakia

SOURCE: East European List (EHAL) Library of  
Congress, Vol. 6, No. 1, January 1957

PISKO, Edward (Bratislava, Hanacka 4)

Determining the optimum conditions for fixing the number of parallel measurements in the spectroscopic analysis of concentration by extrapolation. Acta chimica Hung 41 no.4:373-382 '64.

1. Institut fur anorganische Chemie der Slowakischen Akademie der Wissenschaften, Bratislava.

PILTEVA, Yu.K.

VOLKOV, M.V.; PILTEVA, Yu.K.

Second International Congress of Physicians on the Effect of Living  
and Working Conditions on Health. Vop.pit. 17 no.2:92-95 Mr-Ap '58.  
(PUBLIC HEALTH--CONGRESSES) (MIRA 11:4)

ZAPALKEVICH, I.F.; PLUBINSKIY, A.L. (Moskva)

More hygienic working conditions in the impregnation of armatures  
for electric traction motors. Vrach.delo no.2:195-196 P '56.  
(MIRA 9:7)  
1. Tsentral'naya nauchno-issledovatel'skaya laboratoriya gigiyeny  
i epidemiologii Ministerstva putey soobshcheniya SSSR  
(ELECTRIC INDUSTRY WORKERS--DISEASES AND HYGIENE)  
(RELEASE--PHYSIOLOGICAL EFFECT)

18.12.10 2408 1530 4016

27847

S/133/61/000/008/016/025

A054/A129

AUTHORS: Puzey, I.M.; Pluchek, B.Ya.; Suvorov, V.A.

TITLE: High-permeable iron-aluminum alloys of K012 (Yu12) and K012K (Yu12K)  
grades

PERIODICAL: Stal', no. 8, 1961, 742 - 744

TEXT: The application of iron-aluminum alloys as magnetic and structural materials is discussed in Reference 1 (A.M. Samarin, Elektrichestvo, no. 7, 1960). A Soviet alloy prepared by B.G. Livshits, N.G. Lakhman and K.V. Emmil [Ref. 4: Trudy TsNIIChM (Transactions of the TsNIIChM), v. 23, 1960, 194] contains 14 - 15% Al and some additions of molybdenum and manganese. This alloy displays high magnetic properties after hardening from 600°C in water. A new Soviet iron-aluminum alloy was also developed with a high permeability and ordered structure, containing only 12% aluminum and 88% iron. The test metal was molten in an induction vacuum furnace (magnesite crucible) from armco iron and AB-000 (AV-000) type aluminum. Pouring into sheet bars took place in argon atmosphere. After slow heating to 1,000°C the sheet was rolled to 2.5 mm thickness without any intermediate heating, next the strips were heated to 600°C and rolled to 0.35 mm

Card 1/5

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S/133/61/000/C08/016/025  
A054/A129

High-permeable iron-aluminum alloys of....

(with smooth edges). The magnetic tests were carried out on toroidal samples with an internal diameter of 20 mm and an external diameter of 30 mm. Figure 2 shows the dependence of maximum magnetic permeability and coercitive force of the alloy on its aluminum content after annealing in vacuum at 1,100 and 1,250°C for 1 h with cooling to 600°C at a 100°C/h rate and the 300°C for 3 h. Minimum coercitive force and a very steep peak of maximum permeability were obtained with a 12% aluminum content. The peak is narrow and is caused by the sharp decline of the curve of dependence of anisotropy constants on the alloy's composition. The study of the relationship between maximum permeability of the 12% aluminum alloy and 1-hour annealing shows that permeability increases with the rise in temperature:

Annealing temperature, °C ....	1,000	1,100	1,200	1,250
$\mu_{\text{max}}, 10^3 \text{ gauss/oersted} \dots\dots$	12	18	72	128

The study of specific electric resistance of iron-aluminum alloys with 12 - 13% aluminum content depending on thermal treatment showed that minimum electric resistance was found in alloys after hardening in water. When hardening in oil, resistance is a little higher. Long-term annealing increases the electric resistance of alloys containing less than 11.5% aluminum. Upon increasing the aluminum content, electric resistance rapidly decreases. Alloys with a 12% aluminum content, *X*

Card 2/5

27847

S/133/61/000/008/016/025

A054/A129

Highpermeable iron-aluminum alloys of....

tent, after being cooled to 200°C at a 500°C/h rate and subsequently in furnace, have a specific electric resistance of 1.07 ohm · mm<sup>2</sup>/m. Tests were also carried out with alloys containing 2% cobalt besides 86% iron and 12% aluminum. The table shows that the binary Yu12 and tertiary Yu12K alloys could be obtained with ordered magnetic properties, approximating those of the high-nickel-containing permalloys. The Yu12 and Yu12K alloys have a higher electric resistance (above 1 ohm · mm<sup>2</sup>/m) and a lower specific gravity (6.8 g/cm<sup>3</sup>) than those containing nickel. They have also a high resistance to corrosion and plastic deformation after annealing, and are, moreover, isotropic. Compared with the 50H (50N), 50HXC (50NKhS) and 38HC (38NS) nickel-alloys the iron-aluminum alloys display a steeper permeability curve and are magnetized in fields of a much lower voltage. The watt-losses are lower in the new alloys due to their high electric resistance. They are suitable for transformer cores working at high frequencies, for magnetic amplifier cores, stators, runners and whenever a high chemical resistance is required. There are 4 figures, 1 table and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: J.F. Nachman, J.W. Buchler, Journal of Applied Physics, 1954, v. 25, no. 3, 307; J.F. Nachman, J.W. Buchler, Electrical Manufacturing, 1956, no. 11; M. Hansen, R. Andermo, Constitution Diagram of Binary Alloys, N.Y., 1958.

ASSOCIATION: TsNIIChM

Card 3/5

PUZEY, I.M.; PLUCHEK, B.Ya.; SUVOROV, V.A.

Highly permeable RUL2 and IU12K iron-aluminum alloys. Stal'  
21 no.8:742-744 Ag '61. (MIRA 14:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy  
metallurgii. (Iron-aluminum alloys—Magnetic properties)

NEFEDOV, V.D.; SKOROBOGATOV, G.A.; NOVAK, K.; PLUCHENNIK, G.; GUSEV, Yu.K.

Use of a double tag for detecting glycine formed from  
O(methylene-C14) succinic acid as a result of carbon-14 decay.  
Zhur.ob.khim. 33 no.2:339-342 F '63. (MIRA 16:2)

1. Leningradskiy gosudarstvennyy universitet.  
(Glycine) (Succinic acid) (Carbon isotopes--Decay)

PIUCHENNIK, Genrikh

Mutation process in Chlorella induced by assimilation of radioactive carbon dioxide. Genetika no.5:19-25 N '65.

(MIRA 19;1)

l. Leningradskiy gosudarstvennyy universitet, kafedra radiokhimii  
i kafedra genetiki i selektsii. Submitted April 12, 1965.

PLUCIENNIK, K.

The milling industry in Great Poland in long-term plans. p. 89

PRZEGLAD ZBOZOWO-MLYNARSKI (Polskie Wydawnictwo Gospodarcze) Warszawa, Poland.  
Vol. 3, no. 3, Mar 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 6, no. 9, September 1959.  
Uncl.

PLUCINSKA, A.

Certain problem concerning the reliability of electronic equipment Archiw elektrotech 12 no.2:335-342 '63.

1. Katedra Matematyki Stosowanej, Politechnika, Warszawa.

PLUCINSKA, A. (Warsaw)

On the joint limiting distribution of times spent in particular states  
by a Markov process. Col math 9 no.2:347-360 '62.

PIUCTNSKA, A.

Variance of the mean in a certain sampling scheme. p. 169.

ZASTOSOWANIA MATEMATYKI. (Polska Akademia Nauk. Instytut Matematyczny)  
Warszawa, Poland. Vol. 4, no. 2, 1958.

Monthly List of East European Accessions (EEAI) I.C, Vol. 9, no. 1, Jan. 1960.

Uncl.

PLUCINSKA, A.

Determination of the dispersion ranges for the rational  
functions of complex variables. Archiw elektrotech 12  
no. 4: 669-680 '63.

1. Katedra Matematyki, D, Politechnika, Warszawa.

PLUCINSKA, A.

Determination of the dispersion field of the measurable function  
of variable complex and  $\sqrt[3]{Z}$  losses. Archiw elektrotech 13 no. 2.  
429-438 '64.

1. Department of Mathematics E, Technical University, Warsaw.  
Submitted October 24, 1963.

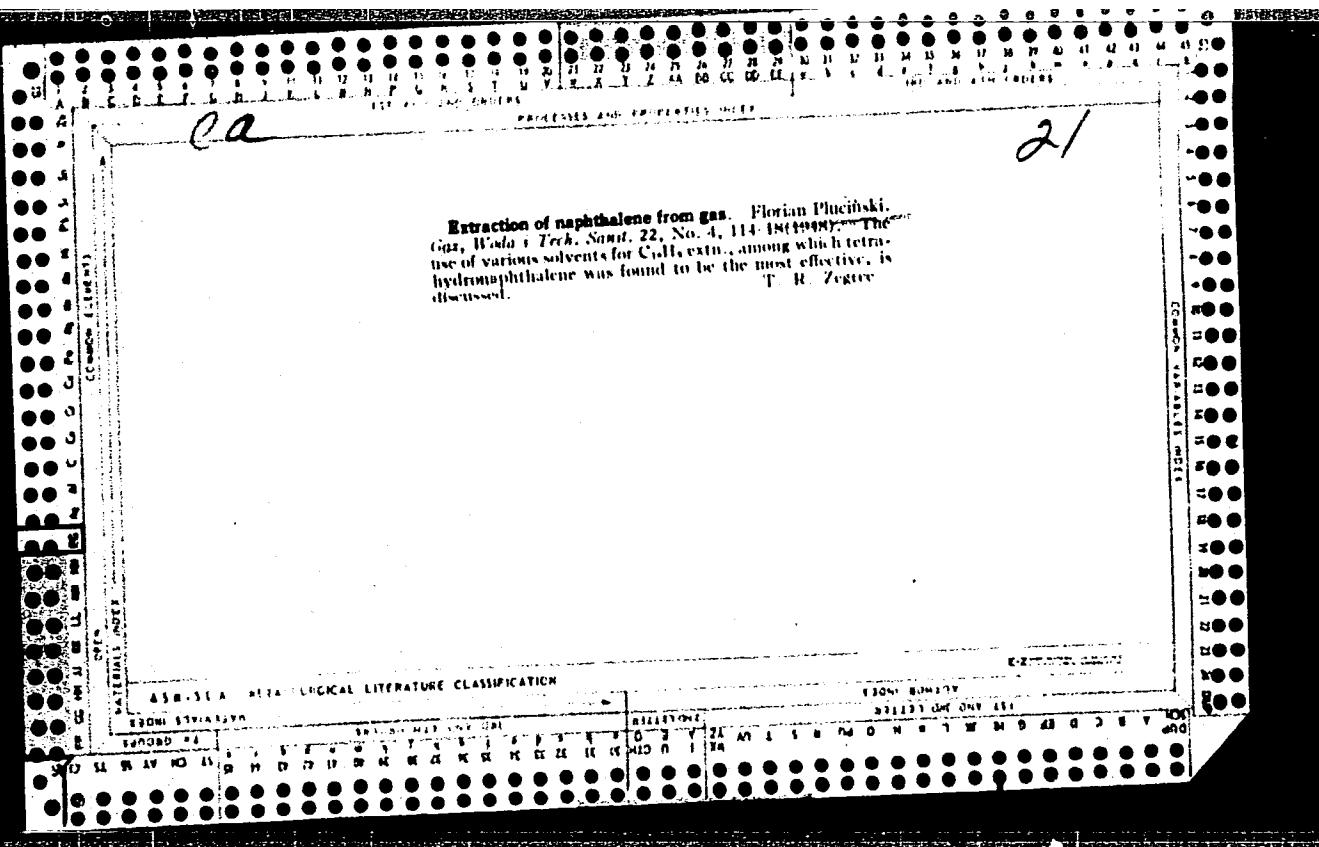
PLUCINSKA, A.

POLAND

Not given (Warsaw)

Warsaw, Colloquium Mathematicum, No. 2, 1962, pp 347-360

"On the Joint Limiting Distribution of Times Spent in  
Particular States by a Markow Process"



21

CA

Dewatering of coal tar. Florian Plucinska, Gac.  
Woda i Tiek. Sanit. 23, 318-24(1940). Various methods  
are discussed.

PLUCINSKI, A.

"The agricultural machinery industry after the Poznan International Fair."

P. 735 (Nowe Rolnictwo, Vol. 7, No. 10, Sept. 1958. Warsaw, Poland.)

Monthly Index of East European Accessions (EEAI) LC, Vol. 8, No. 1, Jan. 1959

PLUCINSKI, Andrzej

Poland; air in the service of agriculture. Mezogazd techn 3  
no.10:18-20 '63.

PLUCINSKI, Janusz

Derivation of 2,4- and 4,6-dinitro-3( $\beta$ -hydroxyethylamino) toluene,  
2,4-dinitrophenylamino-tri (hydroxymethyl) methane and of the  
products of their nitration. Rocznik chemii 33 no.4/5:1219-1222 '59.  
(EEAI 9:9)

1. Katedra Technologii Zwiazkow Azotowych II Politechniki, Wroclaw.  
(Dinitrohydroxyethylaminotoluene)  
(Dinitrophenylaminotrihydroxymethylmethane)  
(Nitration)

PLUCINSKI, Andrzej

Prototypes of the agricultural tractors made by the Mechanical  
engineering Works Ursus. Przegl techn 79 no.4:127-130 F '61.

PLUCINSKI, Janusz

2,4,6- trinitrophenylnitroamino-tri-(hydroxymethyl)-methane  
trinitrate. Chemia stosow 7 no.3:461-470 '63.

1. Katedra Technologii Zwiazkow Azotowych II, Politechnika,  
Wroclaw.

PLUCINSKI, Janusz

2,4,6-trinitro-3( $\beta$ -hydroxyethylnitroamino) toluene nitrate (meta-methylpentryl). Chemia stosow 4 no.2:265-281 '60. (EEAI 10:3)

1. Katedra Technologii Związków Azotowych II Politechniki

Wrocławskiej

(Nitro group)	(Hydroxy compounds)	(Ethyl group)
(Amino group)	(Toluene)	(Nitrates)
(Methyl group)	(Pentryl)	(Explosives)

PLUCINSKI, Janusz

Studies on the condensation of aminoalcohols with halogen derivatives  
of aromatic nitrocompounds. I. Reaction of tri-(hydroxymethyl) amino-  
methane with 2,4-dinitrochlorobenzene. Rocznik chemii 35 no.5:273-281  
'61.

1. Department of Technology of Nitrocompounds II, Institute of  
Technology, Wroclaw.

PLUCINSKI, Janusz; SMOLENSKI, Dionizy

2,4,6-trinitro-3-methylnitroaminotoluene (methyltetryl). Chemia  
stosow 4 no.3/4:479-499 '60. (EEAI 10:9)

1. Katedra Technologii Związków Azotowych II Politechniki Wrocławskiej.

(Tetryl) (Methyl group) (Methylnitrotoluidine)  
(Nitro group)

PLUCINSKI, J.

PLUCINSKI, J. We are building a swimming model of a motorboat. p. 20.

Vol. 11, No. 8, Aug. 1956.

MORZE

MILITARY & NAVAL SCIENCES

London

So: East European Accession, Vol. 6, No. 2, Feb. 1957

Z/011/62/019/001/008/017  
E073/E136

AUTHORS: Pluciński, J., and Smolenski, D.

TITLE: 2,4,6-trinitro-3-methylnitroaminotoluene  
(methyltetryl)

PERIODICAL: Chimie a chemická technologie. Přehled technické a  
hospodářské literatury, v.19, no.1, 1962, 32,  
abstract Ch 62-448. (Chem. stos. v.4, no.3/4, 1960,  
479-499)

TEXT: The results are described of investigation of utilizing sodium dinitrotoluene sulphonates contained in sulphide-containing waste waters. These sulphonates are produced in the process of cleaning trinitrotoluene. Condensation of these with methylamine produces dinitromethylaminotoluene, the nitration of which yields the explosive, metha-methyltetryl. Individual parameters are described of condensation and nitration reactions as well as the physicochemical and explosive properties of methyltetryl.

2 figures, 17 tables, 10 references.

Card 1/1 [Abstractor's note: Complete translation.]

PLUCINSKI, J.

Distr: 4E3d

Preparation of 2,4- and 4, 6-dinitro-3-( $\beta$ -hydroxyethylamino)toluene, 2,4-dinitrophenylaminotris(hydroxymethyl)methane and their nitration products. *Janusz Plucinski* (Politech., Wroclaw, Poland). *Roczniki Chem.* 33, 1219-22 (1959)(German summary).—The reaction of  $\beta$ -aminomethyl alc. with isomeric trinitrotoluenes in hot alc. soln. gave 2,4-dinitro- (I), m. 85.5-7.5°, and 4,6-dinitro-3-( $\beta$ -hydroxyethylamino)toluene (II), m. 115-17.5°, resp. Nitration of I with  $HNO_3$  (d. 1.51) yielded a product, m. 75.5-8.0°, with two more  $NO_2$  groups, whereas that of II gave the nitrate (III), m. 100-2.5°, of the 2,4,6-trinitro deriv. (IV). Denitration of III gave IV, m. 124.5-8.5°. Condensation of 2,4-dinitrobenzene with tris(hydroxymethyl)aminomethane in hot KOH-alc. soln. gave 2,4-dinitrophenylamino tris(hydroxymethyl)methane (V) (m. 140-1.5°) and an unknown by-product, m. 83.5-5.5°. Nitration of V yielded the tri-nitrate of 2,4,6-trinitrophenylultraminotris(hydroxymethyl)methane, m. 151-2°.

A. Kreglewski

3  
140 (NB)

PLUHAR, J.

Distr: 4E3c 2 cys/4E2b(v)/4E3d

✓ Fuel elements, fuel element cladding, and construction materials in reactors. II. Construction materials. Jaroslav Pluhak and Jaroslav Vrtel (State Research Inst. Materials Technol., Prague). *Tzadern energie* 5, 331-5 (1959); cf. CA 54, 2026. — Materials for control rods are discussed. Ag-In-Cd alloy has the advantage (over Cd) of a higher m.p. Hf has the disadvantage of high cost. B and B-steel are widely used despite the danger of deformation by the He produced. B<sub>4</sub>C can be used either alone or dispersed in Al ("boral") and can be enriched with B<sup>10</sup>.

a.k.l.  
// Dispersion of Cd<sub>2</sub>O<sub>3</sub> or Eu<sub>2</sub>O<sub>3</sub> in steel is under development. Requirements for special steels for the manuf. of reactor pressure vessels are discussed; problems include embrittlement under radiation and the welding of austenitic steel 100 mm. thick. Materials for other uses, such as heat-exchanger pipes, are also discussed. H. Newcombe

5  
1-PMR/S  
1-RS

4

PLUCINSKI, M.

The problem of repairing plywood. p. 145

Vol. 6, no. 6, June 1955

PRZEMYSŁ DRZEWNY. Warszawa

SOURCE: East European Accessions List (EEAL), LC., Vol. 5, no. 3, March 1956

PLUCINSKI, M.

A catamaran with sails, the P56.

P. 20 (Morze, Vol. 11, no. 11, (i.e.12) Nov. 1957, Warszawa, Poland)

Monthly Index of East European Acquisitions (EIAI) LC. Vol. 7, no. 2,  
February 1958

PLUCINSKI, M.

We build a tourist kayak.

P. 20 (MORZE) (Warsaw, Poland) Vol. 12, no. 1, Jan. 1958

SO: Monthly Index of East European Accessions (EEAI) LC Vol. 7, No. 5. 1958

PLUCINSKI, M.

PLUCINSKI, M. Trends in the planning of furniture factories in the period of the  
5-year Plan. (To be contd.) p. 300.

Vol. 6, No. 11, Nov. 1955.

PRZEMYSŁ DRAEWNY  
TECHNOLOGI  
Warszawa, Poland

So: East European Accession, Vol. 5, No. 5, May 1956

PLUCINSKI, M.

PLUCINSKI, M. The problem of the coefficient of power in industrial plants. p. 222

Vol. 9, no. 7/8, July/Aug. 1956

CHEMIK

SCIENCE

Warszawa, Poland

So: East European Accession, Vol. 6, no. 2, Feb. 1957

PLUCINSKI, M.

We are building a sailing punt. P. 20  
MORZE. (Liga Morska) Warszawa.  
No. 4, Apr. 1956

SOURCE: EEL LC Vol. 5, No. 7, July 1956

PLINCINSKI, M.

Furniture at the Leipzig Fairs. p. 3.  
PRZEMYSŁ DRZEŻNY, Warszawa, Vol. 6, no. 5, May 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955,  
Uncl.

PLUCINSKI, M.

Boards made of wood chips and their use in the furniture industry, p. 8.  
(PRZEMYSŁ DRZEWNY, Warszawa, Vol. 6, no. 3, Mar. 1955.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955,  
Uncl.

PLUCINSKI, M.

"From Export Problems of the Lumber Industry", p. 10, (PRZEWYSL DRZEZY, Vol. 5, No. 12, Dec. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EAL), LC, Vol. 4, No. 5, May 1955, Uncl.

PLUCINSKI, M.

"The influence of factory designing establishment on furniture designing." p.12.  
(PRZEMYSŁ DRZEŻNY. Vol. 6, No. 1, Jan. 1955. Warszawa, Poland)

SO: Monthly List of East European Accessions. (EEAL). LC. Vol. 4, No. 4.  
April 1955. Uncl.

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001341320014-2

PLUGINSKI, M., inz.

The Szkutnik Designing Office in Gdynia designs P-15 sea going  
of boats. Horyz techn no. 6:18-19. '62.

APPROVED FOR RELEASE: 08/23/2000

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PLUCINSKI, M.

"The problem of a department for preparatory work in a furniture factory", p. 8  
(Przemysl Drewny. Vol. 4, no. 12, Dec. 1953, Warszawa)

Vol. 3, No. 3

SO: Monthly List of East European Accessions, Library of Congress, March 1954, Uncl.

Plucinski, M.

"The Furniture Industry In the People's Republic of Germany", p. 254, (PRZEMYSŁ DRZEWNY,  
Vol. 3, #9, September, 1952, Warszawa, Poland)

So: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress, August, 1953  
Uncl.

S/096/63/000/002/002/013  
E194/E455

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Pludovskaya, G.N., Engineer

TITLE: The influence of combustion conditions on heat exchange  
in pulverized-fuel furnaces

PERIODICAL: Teploenergetika, no.2, 1963, 9-11

TEXT: Existing methods of calculating heat exchange in boiler furnaces have the disadvantage that they do not bring out the influence of the intensity of radiation from the flame on the temperature distribution. The author, in a previous paper (Energomashinostroyeniye, no.6, 1956), used the concept of the relative location of the maximum temperature along the flame length  $X_T$ , namely the ratio between the distance from the burner mouth to the point of highest temperature and the total length of the flame path in the furnace. In the present state of knowledge it is only possible to establish empirical relationships between  $X_T$  and the burner location and arrangements. The relationship between the intensity of flame radiation and the temperature distribution was studied on a special experimental furnace chamber at the TsKTI. The maximum temperature occurred at the tip of the flame cone when

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The influence of combustion ...

burning pulverized fuel;  $X_T$  ranged from 0.2 to 0.48, depending upon the type of coal used, it also depends on the fineness of milling.  $X_T$  increases with the excess-air factor, because the greater amount of air moves faster; it also increases as the milled fuel is made coarser, because big particles burn slowly. Alteration of thermal loading and of the primary to secondary air speed-ratio have little effect on  $X_T$ . Increasing  $X_T$  reduces the mean intensity of flame radiation and so raises the temperature at which the gas leaves the furnace  $S_T''$ . Thus, raising  $X_T$  from 0.2 to 0.5 raised the discharge temperature by more than 100°C. Using the standard method of calculation, the formula for furnace gas discharge-temperature may be written

$$\frac{\theta_T''}{1 - \theta_T''} = \left( A \frac{B_0}{a_T} \right)^{0.6}$$

In using this to allow for the influence of heat-transfer conditions on temperature distribution, we need to consider the coefficient  $A$ , as a function of  $X_T$ . In fact,  $A$  increases with

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Effect of combustion processes on the heat exchange in pulverized  
coal furnaces. Teploenergetika 10 no.2:9-11 F '63. (MIRA 16:2)

1. TSentral'nyy kotloturbinnyy institut.  
(Heat—Transmission) (Furnaces)

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APPENDIX C. MEASUREMENTS OF FLAME TEMPERATURE AND CONCENTRATION

TEST 1. MEASUREMENTS OF FLAME TEMPERATURE AND CONCENTRATION

EXPERIMENTAL EQUIPMENT AND PROCEDURE

TEST 1. MEASUREMENTS OF FLAME TEMPERATURE AND CONCENTRATION

existing methods of calculating combustion and flame radiation using a circular burner 180 mm diameter. The experimental equipment is described. Measurements were made: of the distribution of concentration of CO<sub>2</sub>, CO and O<sub>2</sub> and of the temperatures across and along the flame; of the radiant flux from the flame on to the furnace surface and of the flame blackness. Close to the burner the concentrations of CO<sub>2</sub> and O<sub>2</sub> were very irregular with high O<sub>2</sub> and low CO<sub>2</sub> content on the flame axis until a distance of nearly two diameters from the burner, beyond which the CO<sub>2</sub> concentration increased and the O<sub>2</sub> concentration dropped. In the first section of irregular

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